



## **HYPRON® Lead Free Solution**

Aliphatic & aromatic hydrocarbons resistant cables

# Safe refining and petrochemical processing ...

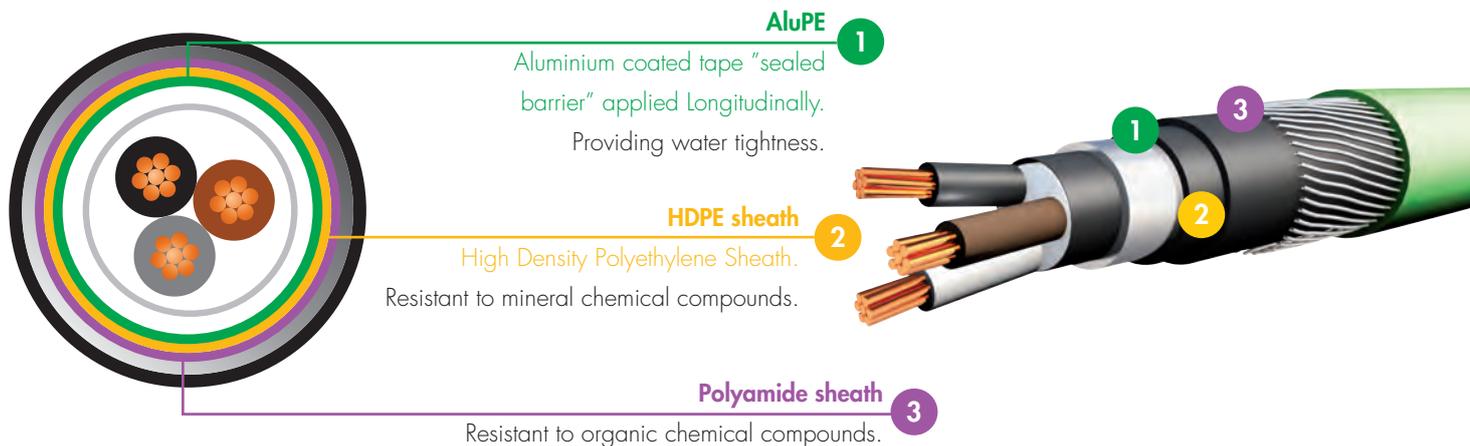
The petrochemical industry is an environment where there are serious risks of damage to cables due to the presence of hydrocarbons, acids or alkaline compounds. Cables withstanding aromatic hydrocarbons with a lead

sheath are traditionally used to protect the networks. This technology is a pollutant which no longer meets the criteria drawn up for sustainable development. Nexans has developed a new generation of cables which withstand unleaded

aromatic and aliphatic hydrocarbons: the **HYPRON®** product range. This alternative solution is eco-friendly both on the sites where the cables are installed and when carrying out end of life recycling operations.

## HYPRON® design

technology is designed by three components:



## HYPRON® process

When chemical or environmental protection is required, one of the following methods shall be used. Lead sheathed cables shall be used where spillage of oil or hydrocarbons are expected. Alternative hydrocarbon resistant sheaths can be offered. As example, layer sheaths comprising a laminated sheath and an additional layer of polyamide can be considered. The laminated sheath shall consist of a longitudinal

overlapped aluminium foil with an extruded layer of high density polyethylene and polyamide outer sheathing.

A co-extrusion process is used, allowing a powerful adhesion of these 3 sheaths.

### HYPRON® technology is available for:

- medium voltage, low voltage, instrumentation, control, communication and compensation,
- cables armored or non armored versions,
- specific fire performances...

## Find HYPRON® full range on our e-service ...

Nexans e-service provides to customers an on-line catalogue of Nexans products for each country. Many tools such as browse tool, search, help are available to the user. Customers will be informed on Nexans technologies as **HYPRON®**, events and product news. For more details please get registered on [www.nexans.com](http://www.nexans.com).

**... or ask for your own specifications**

... require lead-free HYPRON<sup>®</sup> cables

**HYPRON<sup>®</sup> performances**

	PROCEDURES STANDARDS	RESULTS
Crushing resistance	Nexans internal procedure - 10 days - 4.000 tons on cables - 400 tons per day	No cut, cracking, tear, or punch Electrical resistance integrity Good capacity to keep its initial design and dimensions
Accessories (epoxy resin junctions)	NF M 87-202: 28 days - Aromatic hydrocarbon resistance (benzene) - Oil resistance (IRM 903)	Electrical properties compliance Physical integrity compliance
KEMA Report of performance	IEC 60332-3-22(A) (fire test propagation) Nexans internal procedure for oil resistance (IRM 903) (1)	Passed Passed
DNV type test	IEC 60811: Nexans internal procedure for oil resistance (IRM 903) (2)	Passed

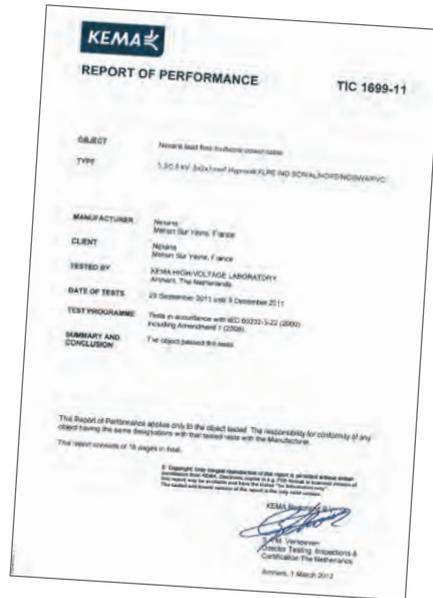
(1) Ageing test: 28 days at 90°C at 110 V - (2) Ageing test: 24 weeks 90°C

**KEMA certification**

KEMA is a global, leading authority in energy consulting, testing & certification, active throughout the entire energy value-chain in a world of increasing demand for energy.

**DNV certification**

DNV, Det Norske Veritas, is one of the leading global providers of accredited management systems certification. They offer a broad portfolio of services within management system certification.

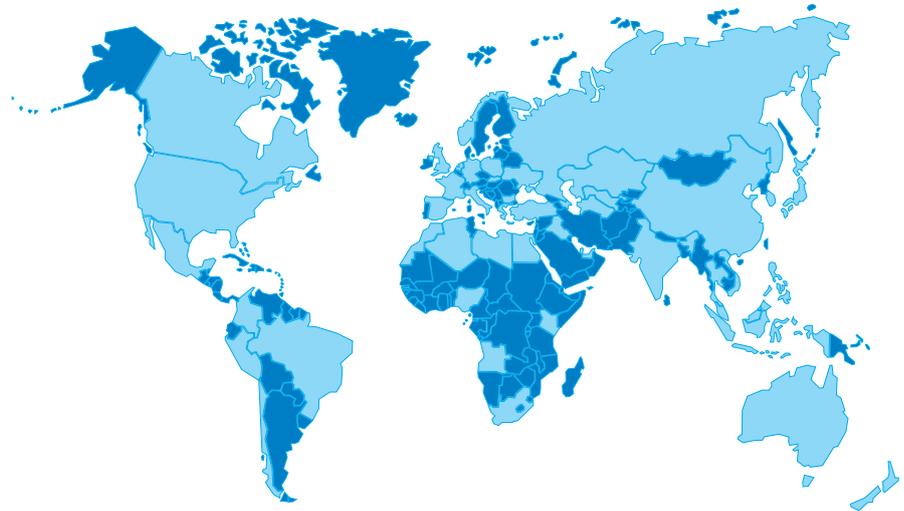


**HYPRON<sup>®</sup> cables, several key advantages:**

- eco-friendly cable solutions that meet international standards,
- lighter, lower diameter than the equivalent lead covered cables,
- easier installation,
- greater cable length per cable drum,
- fewer connections over large distances,
- lower transportation costs.

# Trust our worldwide O&G Projects Expertise Support

North America  
South America  
Western Europe  
Africa  
Central/Eastern Europe  
Asia Pacific  
Caspian area  
Mideast



Global expert in cables and cabling systems

With energy as the basis of its development, Nexans, worldwide expert in the cable industry, offers an extensive range of cables and cabling systems. The Group is a global player in the infrastructure, industry, building and Local Area Network markets. Nexans addresses a series of market segments: from energy, transport and telecom networks to shipbuilding, oil and gas, nuclear power, automotives, electronics, aeronautics, material handling and automation.

Nexans is a responsible industrial company that regards sustainable development as integral to its global and operational strategy. Continuous innovation in products, solutions and services, employee development and engagement, and the introduction of safe industrial processes with limited environmental impact are among the key initiatives that place Nexans at the core of a sustainable future.

With an industrial presence in 40 countries and commercial activities worldwide, Nexans employs 24,500 people and had sales in 2011 of 7 billion euros. Nexans is listed on NYSE Euronext Paris, compartment A.

For more information, please consult: [www.nexans.com](http://www.nexans.com) or [www.nexans.mobi](http://www.nexans.mobi)

Nexans France

Le Christophe Colomb 2 - 4-10 rue Mozart - 92587 Clichy Cedex - France

Phone: +33 (0)1 55 62 70 00 - Fax: +33 (0)1 55 62 78 00 - Web: [www.nexans.fr](http://www.nexans.fr)